

19

Journal of **MOLECULAR** **BIOLOGY**

EDITOR-IN-CHIEF

J. C. KENDREW

EDITORIAL BOARD

P. Doty

A. F. Huxley

R. L. Sinsheimer

J. D. Watson

M. H. F. Wilkins

VOLUME II

1960



ACADEMIC PRESS
LONDON and NEW YORK

G. ZUBAY AND M. H. F. WILKINS. X-ray Diffraction Studies of the Structure of Ribosomes from <i>Escherichia coli</i>	105
D. B. DUNN, J. D. SMITH AND P. F. SPAHR. Nucleotide Composition of Soluble Ribonucleic Acid from <i>Escherichia coli</i>	113
BO G. MALMSTRÖM AND TORE VÄNNGÅRD. Electron Spin Resonance of Copper Proteins and some Model Complexes	118

NUMBER 3, AUGUST 1960

SAM M. BEISER, GERTRUDE C. BURKE AND STUART W. TANENBAUM. Immunochemical Studies on a Galactosyl-Protein Conjugate	125
ANDREW G. SZENT-GYÖRGYI, CAROLYN COHEN AND DELBERT E. PHILPOTT. Light Meromyosin Fraction I: A Helical Molecule from Myosin	133
A. D. HERSHEY AND ELIZABETH BURGI. Molecular Homogeneity of the Deoxyribonucleic Acid of Phage T2	143
C. I. DAVERN AND MATTHEW MESELSON. The Molecular Conservation of Ribonucleic Acid during Bacterial Growth	153

LETTERS TO THE EDITOR

J. D. WATSON AND J. W. LITTLEFIELD. Some Properties of DNA from Shope Papilloma Virus	161
R. A. COX AND U. Z. LITTAUER. Properties of Low Molecular Weight RNA from <i>E. coli</i>	166
JOHN A. THOMA AND D. E. KOSHLAND, JR. Three Amino Acids at the Active Site of Beta Amylase	169

NUMBER 4, OCTOBER 1960

HELGA BOEDTKER. Configurational Properties of Tobacco Mosaic Virus Ribonucleic Acid	171
H. E. HUXLEY AND G. ZUBAY. The Structure of the Protein Shell of Turnip Yellow Mosaic Virus	189
H. L. NIXON AND A. J. GIBBS. Electron Microscope Observations on the Structure of Turnip Yellow Mosaic Virus	197
A. KLUG AND J. T. FINCH. The Symmetries of the Protein and Nucleic Acid in Turnip Yellow Mosaic Virus: X-Ray Diffraction Studies	201
MONICA RILEY, ARTHUR B. PARDEE, FRANÇOIS JACOB AND JACQUES MONOD. On the Expression of a Structural Gene	216
JULIAN B. FLEISHMAN. The Physical Properties of DNA from T2 and T4 Bacteriophage	226

LETTERS TO THE EDITOR

ADOLF WACKER, SIGRID KIRSCHFELD AND LOTHAR TRÄGER. Über den Einbau Purin-analoger Verbindungen in die Bakterien-Nukleinsäure	241
RICHARD S. MORGAN. Concerning the Ribonuclease Sequence	243
S. KRIMM. Structure of Frizzle Mutant Feather Keratin	247

NUMBER 5, NOVEMBER 1960

HISAO UCHIDA AND GUNTHER S. STENT. Protein Synthesis and the Onset of Intracellular Bacteriophage Growth. I. Stabilization of the Infecting Phage to ³² P Decay	251
HISAO UCHIDA AND GUNTHER S. STENT. Protein Synthesis and the Onset of Intracellular Bacteriophage Growth. II. Stabilization to ³² P Decay of the Genome of a Secondary Phage	262
MELVIN SANTER, DAVID C. TELLER AND WILLARD ANDREWS. Environment-Induced Changes in the Base Ratios of Ribonucleic Acid of <i>Escherichia coli</i>	273
E. M. BRADBURY, L. BROWN, A. R. DOWNIE, A. ELLIOTT, R. D. B. FRASER, W. E. HANBY AND T. R. R. McDONALD. The "Cross-β" Structure in Polypeptides of Low Molecular Weight	276
G. L. BROWN AND G. ZUBAY. Physical Properties of the Soluble RNA of <i>Escherichia coli</i>	287
GEORGE D. GUTHRIE AND ROBERT L. SINSHEIMER. Infection of Protoplasts of <i>Escherichia coli</i> by Subviral Particles of Bacteriophage φX174	297
MASAYASU NOMURA, BENJAMIN D. HALL AND S. SPIEGELMAN. Characterization of RNA Synthesized in <i>Escherichia coli</i> after Bacteriophage T2 Infection	306

LETTER TO THE EDITOR

C. R. WORTHINGTON. Discrete Low-Angle X-ray Diffraction from Air-Dried Mitochondria	327
---	-----

NUMBER 6, DECEMBER 1960

CARL E. J. KIRCHNER. The Effects of the Mutator Gene on Molecular Changes and Mutation in <i>Salmonella typhimurium</i>	331
F. LUCAS, J. T. B. SHAW AND S. G. SMITH. Comparative Studies of Fibroins. I. The Amino Acid Composition of Various Fibroins and its Significance in relation to their Crystal Structure and Taxonomy	339
J. O. WARWICKER. Comparative Studies of Fibroins. II. The Crystal Structures of Various Fibroins	350
JERRY DONOHUE AND KENNETH N. TRUEBLOOD. Base Pairing in DNA	363
D. B. GAMMACK, E. R. HUEHNS, E. M. SHOOTER AND PARK S. GERALD. Identification of the Abnormal Polypeptide Chain of Haemoglobin G _{Ib}	372
G. SCHOLES, J. F. WARD AND J. WEISS. Mechanism of the Radiation-Induced Degradation of Nucleic Acids	379
A. D. KAISER AND DAVID S. HOGNESS. The Transformation of <i>Escherichia coli</i> with Deoxyribonucleic Acid isolated from Bacteriophage λdg	392
G. SETTERFIELD, J. M. NEELIN, E. M. NEELIN AND S. T. BAYLEY. Studies on Basic Proteins from Ribosomes of Buds of Pea Seedlings	416
J. M. KAPER. Preparation and Characterization of Artificial Top Component from Turnip Yellow Mosaic Virus	425
J. T. FINCH AND A. KLUG. X-ray "Powder" Diagrams of Crystals of an Artificial Top Component from Turnip Yellow Mosaic Virus	434

REVIEW ARTICLE

A. S. SPIRIN. On Macromolecular Structure of Native High-Polymer Ribonucleic Acid in Solution	436
---	-----

LETTER TO THE EDITOR

M. BEER, P. J. HIGHTON AND B. J. MCCARTHY. Structure of Ribosomes from <i>Escherichia coli</i> as revealed by their Disintegration	447
Index	451